



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|-----------------------------|
| 10/724,913 \ | 12/01/2003 | Takayuki Kinoshita | JP920020209US1 | 3308 |
| 48583 7590 11/30/2007 BRACEWELL & GIULIANI LLP PO BOX 61389 HOUSTON, TX 77208-1389 | | | EXAMINER DANG, HUNG Q | |
| | | | ART UNIT 2621 | PAPER NUMBER |
| | | | NOTIFICATION DATE 11/30/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

MICHAEL.NOE@BGLLP.COM
robyn.pyle@bgllp.com
pamela.clark@bgllp.com

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/724,913 | Applicant(s) KINOSHITA ET AL. | |
| | Examiner Hung Q. Dang | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-8 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-8 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/01/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/02/2007 have been fully considered but they are not persuasive.

At pages 5-6, Applicant argues Bohrer is indifferent to chronological sequence of data blocks. In response, the Examiner respectfully disagrees. In [0035] with reference to Fig. 3, Bohrer recites an access order which starts from data block A, then data block X, then data block B. Note that the accesses are not performed in parallel but sequentially. Specifically, data block X is accessed before data block B got accessed because data block B is not needed until access to data block X is completed; thus, saving time to travel the heads around.

At page 6, Applicant argues Bohrer are silent regarding data blocks that are before the current data block. In response, the Examiner respectfully disagrees. Again, as described above, Bohrer describes an access order starting from data block A, then data block X, then data block B. Assume the current time to be the time when data block X is being accessed. At this time the data block X is the current data block while data block A is sequentially before the current data block X and data block B is sequentially after the current data block X.

For that reasons, the claims stand rejected as previously presented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US Patent 7,003,711) and Bohrer et al. (US 2003/0004948).

Regarding claim 6, Noda et al. disclose a content reproducing apparatus for reading and reproducing a digital content that requires sequential reproduction (Fig. 6; column 4, lines 29-31; column 11, lines 42-50) and is recorded in a disk-shaped recording medium (Fig. 1; Fig. 4), comprising: head position estimating means for estimating a present position of a head with respect to the recording medium for reading the digital content (column 11, lines 52-54); data position calculating means for calculating a position of a data block for a digital content to be read next, and positions of other data blocks existing near the data block (column 11, lines 52-54; column 12, lines 22-37); and moving destination determining means for determining a data block at which the time required to move the head is the shortest, as a data block to be read next, based on the present position of the head, which has been estimated by the head position estimating means, and the positions of the respective data blocks, which have been calculated by the data position calculating means (column 11, lines 52-58).

However, Noda et al. do not disclose the disk-shaped recording medium in a hard disk drive; sequential reading of data block; data position calculating means for calculating a position of a data block for a digital content to be read next in sequence,

and positions of other data blocks existing sequentially before and sequentially after the data block; and sequential positions of the respective data blocks.

Bohrer et al. disclose a disk-shaped recording medium in a hard disk drive ([0032]); sequential reading of data block ([0035]; Fig. 3; also see "Response to Arguments" above); data position calculating means for calculating a position of a data block for a digital content to be read next in sequence, and positions of other data blocks existing sequentially before and sequentially after the data block (Fig.3; [0035]; also see "Response to Arguments" above); and sequential positions of the respective data blocks (Fig.3; [0035]; also see "Response to Arguments" above).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the hard disk drive and the data position calculating means disclosed by Bohrer et al. into the apparatus disclosed by Noda et al. because, according to Bohrer et al., the incorporated feature would help in minimizing disk head movement and heat dissipation and conserve energy ([0035]) and also, the hard disk drive can provide large capacity of storage with small access time.

Regarding claim 7, Noda et al. also disclose the moving destination determining means determines, based on a rotation latency necessary for the head to move on a track having predetermined data existing thereon and then for the recording medium to rotate to thereby cause the data to reach the position of the head, a time required to move the head to the position of the corresponding data block (column 9, lines 40-45; column 11, lines 55-58).

Regarding claim 15, Noda et al. disclose a method of controlling a content reproducing apparatus for reading and reproducing a digital video content (column 5, lines 39-45; Fig. 6; column 4, lines 29-31; column 11, lines 42-50) recorded in a disk-shaped recording medium (Fig. 1; Fig. 4), comprising: estimating the present position with respect to the recording medium, of a head for reading the digital video content (column 5, lines 39-4; column 11, lines 52-54); calculating a position of a data block for the digital video content to be read next, and positions of other data blocks existing near the data block (column 5, lines 39-4; column 11, lines 52-54; column 12, lines 22-37); calculating a time required to move the head, based on the estimated present position of head and the positions of the respective data blocks (column 11, lines 52-58; column 9, lines 40-45).

However, Noda et al. do not disclose the disk-shaped recording medium in a hard disk drive; calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block and reading a data block at which the calculated time required to move the head is the shortest.

Bohrer et al. disclose the disk-shaped recording medium in a hard disk drive ([0032]); calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block ([0035]) and reading a data block at which the calculated time required to move the head is the shortest ([0034]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of calculating the positions of data and reading a data block at which the calculated time required to move the head is the shortest and the hard disk drive disclosed by Bohrer et al. into the method disclosed by Noda et al. because, according to Noda et al., the incorporated feature would help in minimizing disk head movement and heat dissipation and conserve energy ([0035]) and a hard disk drive also can provide large capacity of storage with small access time.

Claim 17 is rejected for the same reason as discussed in claims 6 and 15 above.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US Patent 7,003,711) and Bohrer et al. (US 2003/0004948) as applied to claims 6-7, 15, and 17 above, and further in view of Dobbek et al. (US Patent 6,219,198).

Regarding claim 8, see the teachings of Noda et al. and Bohrer et al. as discussed in claim 6 above. However, the proposed combination of Noda et al. and Bohrer et al. does not disclose the head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the magnetic head.

Dobbek et al. disclose a head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the magnetic head (column 11, lines 34-43).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the head position estimating means disclosed by Dobbek et al. into the apparatus disclosed by Noda et al. and Bohrer et al. because, according to Dobbek et al., it would improve accuracy (column 3, lines 5-8).

Claim 16 is rejected for the same reason as discussed in claim 8 above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

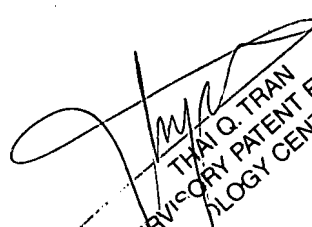
Application/Control Number:
10/724,913
Art Unit: 2621

Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner


THAI Q. TRAN
SUPERVISORY PATENT EXAMINER
BIOLOGY CENTER 2600